

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002734**Date Inspected:** 27-May-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

Caltrans Quality Assurance Inspector (QAI) Bruce Berger arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QAI observed and/or discovered the following.

The Caltrans QAI observed welding utilizing the dual process WPS-B-T-2342-U1 (U-rib)-3 welding procedure specification (WPS) for closed rib welding of the Production Monitoring Test (PMT) #1 for Production Panel DP603-001 and DP589-002 on closed U-rib Partial Joint Penetration (PJP) welds in Bay #1. ZPMC welding personnel performed Gantry Machine, Gas Metal Arc Welding (GMAW) for the root pass and immediately performed Gantry Machine, Submerged Arc Welding (SAW) for the cover/final pass on PMT #1, using gantry machine #1. Upon completion of the SAW pass on U-rib PJP welds on PMT #1 Visual Testing (VT) was performed on weld #1 through #6 by ZPMC personnel and was found unacceptable due to lack of fusion on weld joint 001. PMT-2 was then run and QC accepted then VT was verified by the Caltrans QAI. Ultrasonic Testing (UT) was then performed by ZPMC inspector and PMT #2 was determined to be acceptable. Macro etch samples were selected by the Caltrans QAI on PMT #2.

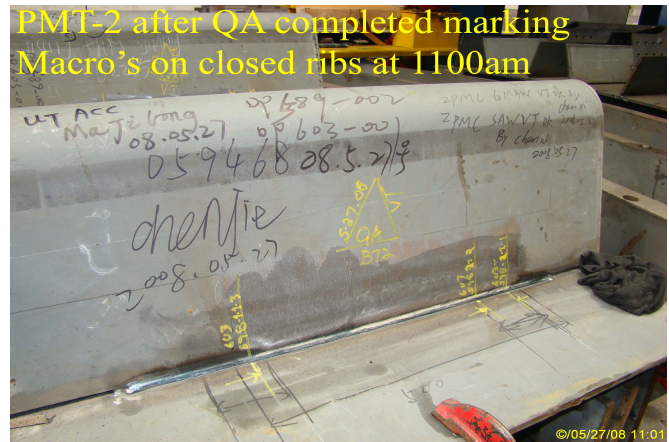
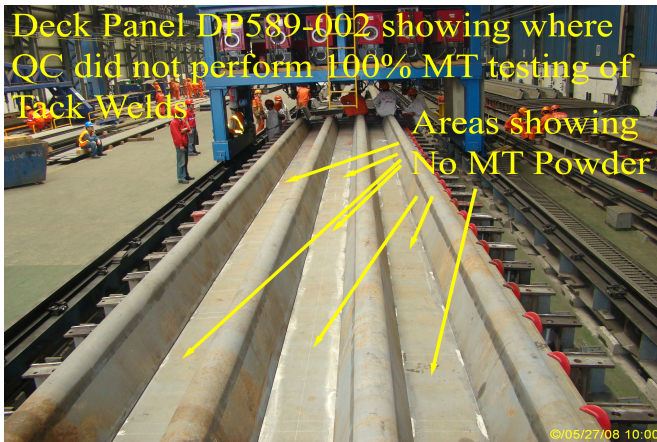
The Caltrans QAI performed magnetic particle testing (MT) on selected tack welds on DP603-001 and DP589-002 and found approximately one out of five to have linear indications. ABS Inspector Warren Buehler assisted in the MT examination and informed Mr. Steve Lawton also of ABF about the out come of the inspection. Mr. Lawton came down and viewed the results. QC then performed MT on the same selected tack welds and ground to remove indications. Mr. Lawton had stated that he had informed ZPMC QC to perform MT on 100% of the closed u-rib tack welds. ZPMC did not carry out this testing.

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## WELDING INSPECTION REPORT

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### Summary of Conversations:

As noted above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Patrick Lowry, 858 344-2712, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Berger, Bruce
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Quality Assurance Inspector
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<b>Reviewed By:</b>	Cochran, Jim
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QA Reviewer
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